



AMERICA'S ARMY:
THE STRENGTH OF THE NATION

U.S. ARMY

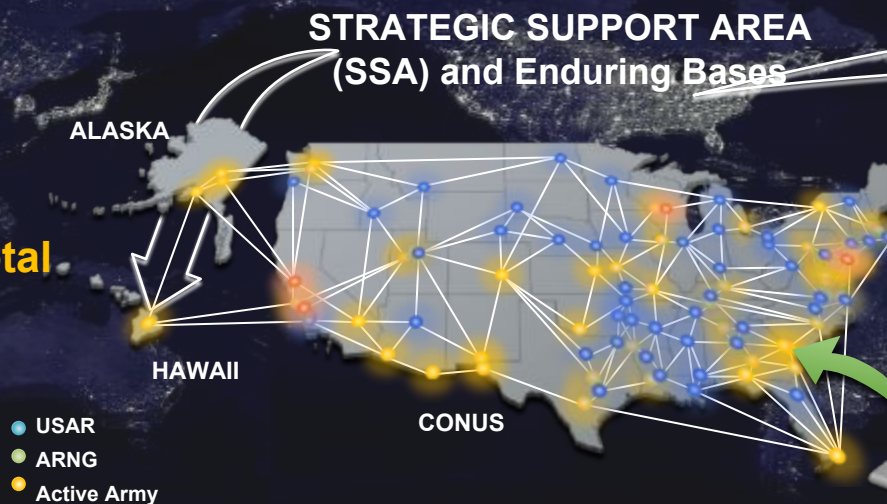
USAR Senior Commander/Garrison Commander Conference
Climate Change and Energy Resilience
24 March 2022

Ms. Christine Ploschke
Acting Deputy Assistant Secretary of the Army for
Energy & Sustainability





**Modern
Installations
Support the Total
Army**



THE OPERATING ENVIRONMENT

- New Threats
- Multi-Domain Operations
- Technology



VISION

- Every Installation a Platform of Capabilities with a COP
- Constellations of Installations with Enterprise Connectivity
- Dispersed, Adaptive, Resilient

INFORMATION AGE INSTALLATIONS

Installations Strategy LOEs drive POM 23-27 funding requirements to support and enable the MDO Ready Force of 2035

Take Care of People

Strengthen Readiness & Resilience

Modernize and Innovate

Promote Stewardship

Quality / Functional Facilities
Data Analytics

- Operationalize Installations
 - Expand Protection
 - Adapt Resilient Systems
 - Facility Investment Plans
- Modernize and Secure the Information Backbone
 - Support Army Modernization in the AMS
 - Transform Installation Operations
 - Reward Innovation
 - Preserve Natural Resources
 - Remediate Contaminants
- Implement Metrics / Modern Technologies

Modern Services
Safe Operations
Partnerships

ENDSTATE

Modern, resilient, sustainable installations, enhancing strategic readiness in a contested MDO battlespace, while providing quality facilities, services & support to our Soldiers, Families & Civilians

PEOPLE

READINESS

MODERNIZATION



The Army Climate Strategy Enables Army Readiness and Directly Supports Modernization

The ACS has three lines of effort (LOE):

- **Installations** will enhance resilience and sustainability by adapting infrastructure and natural environments, securing access to training and testing lands into the future, and mitigating GHG emissions
- **Acquisition and Logistics** will increase operational capability while reducing sustainment demand and strengthening climate resilience
- **Training** will prepare a force that is ready to operate in a climate-altered world, maintaining the ability to win in combat





Line of Effort 1: Installations

Strategic Outcome (SO):

Enhance resilience and sustainability by adapting infrastructure and natural environments to climate change risks, while also mitigating GHG emissions

Intermediate Objectives (IOs):

1.1	Install a microgrid on every installation by 2035
1.2	Achieve on-site carbon-free power generation for Army critical missions on all installations by 2040
1.3	100% carbon pollution-free electricity for Army installations' needs by 2030
1.4	Implement installation-wide building control systems by 2028
1.5	Achieve 50% reduction in GHG emissions from all Army buildings by 2032
1.6	Attain net-zero GHG emissions from Army installations by 2045
1.7	Field an all-electric light-duty non-tactical vehicle fleet by 2027
1.8	Field an all-electric non-tactical vehicle fleet by 2035
1.9	Continue to advocate for an expanded Army Compatible Use Buffer (ACUB)
1.10	Include climate change threat mitigation into Army land management decisions
1.11	Incorporate the latest climate and environmental science into stationing, construction, and fielding decisions



Line of Effort 2: Acquisition & Logistics

Strategic Outcome (SO):

Increase operational capability while reducing sustainment demand and strengthening climate resilience

Intermediate Objectives (IOs):

2.1	Establish policies that standardize contingency basing to increase resilience and reduce fuel requirements
2.2	Significantly reduce operational energy and water use by 2035
2.3	Carbon-pollution free contingency basing by 2050
2.4	Modernize existing Army platforms by adding mature electrification technologies like Tactical Vehicle Electrification Kits (TVEK) and anti-idle
2.5	Field purpose-built hybrid-drive and fully-electric tactical vehicles in this decade
2.6	Seek a fully-electric option to meet every ground tactical vehicle requirement by 2050
2.7	Develop predictive logistics that drive more precise and faster decisions
2.8	Adopt a Buy Clean policy for procurement of construction materials with lower embodied carbon emissions
2.9	Implement a revised energy efficiency key performance parameter (KPP)
2.10	Net-zero GHG emissions from all Army procurement by 2050
2.11	Analyze all Army supply chain Tier 1 sources and contracts for climate change risks and vulnerabilities by 2025
2.12	Develop plans, policies, and contracts to ensure Army supply chain resilience by 2028



Line of Effort 3: Training

Strategic Outcome (SO):

Prepare a climate-ready force that possesses the concepts, plans, and doctrine required to operate in a climate-altered world

Intermediate Objectives (IOs):

3.1	Beginning in 2024, publish climate change lessons and best practices every two years
3.2	Update Army programs of instruction (POIs) for leader development and workforce training to incorporate climate change topics
3.3	Implement climate-informed POIs not later than 2028
3.4	By 2035, double the number of Soldiers and Army civilians serving in strategic headquarters with advanced civilian credentials on climate change topics
3.5	All Army operational and strategic exercises and simulations account for or inject climate change risks and threats by 2028
3.6	Optimize the Army's mix of distributed learning, virtual learning, and resident courses
3.7	Substantially reduce direct GHG emissions from Army collective training while maintaining the ability to win decisively in combat

Physical



Sniper Attack on California Power Grid, 2013

Natural



Power lines knocked down during Hurricane Delta, October 2020, Ft Polk, LA

Cyber

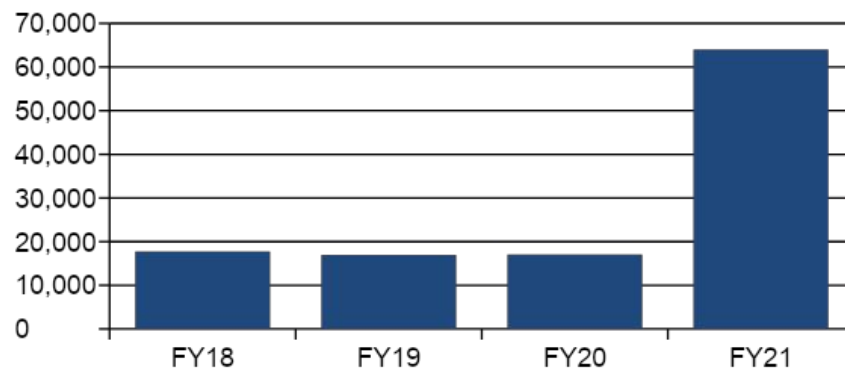


Army cyberspace operations officer participates in field training exercise at Muscatatuck Urban Training, October 2020

Army Utility Outages

- Utility outages impact Army's access to electricity, natural gas, steam, water, & water treatment
- Spike in FY21 reflects more stringent Army reporting requirements
- Total of 3,579 outages reported

Total Unplanned Outage Hours





VISION

Army installation energy and water infrastructure supporting critical missions in the Strategic Support Area will be:

RESILIENT

Ensure energy and water for critical missions under all conditions



Anniston Army Depot, AL
7.5 MW Solar Array (ERCIP)

EFFICIENT

Manage energy and water use to meet requirements effectively and sustainably



Ft. Irwin, CA
Water Treatment Plant (MILCON)

AFFORDABLE

Manage energy and water costs to enable the Army to refocus investment



Fort Knox, KY -- Godman Army Airfield,
KY LED Lighting (ESPC)

Installations Must Make Energy and Water Choices that Maintain Critical Operations During Unexpected Grid Outages



- **Private Equity**

- Real Estate Outgrants (e.g. lease, easement)
10 U.S.C. § 2667, 10 U.S.C. § 2668

- **Private Equity capable with Army payments**

- Power Purchase Agreements *10 U.S.C. § 2922a*
- Utilities Privatization (UP) *10 U.S.C. § 2688*

- **Third Party Financing**

- Energy Savings Performance Contracts (ESPCs)
42 U.S.C. § 8287 et seq. and 10 U.S.C. § 2913
- ESPC ENABLE
- Utility Energy Service Contracts (UESCs),
42 U.S.C. § 8256(c) and 10 U.S.C. § 2866 and 2913

- **Upfront DoD or Army Appropriated Funds**

- Operations and Maintenance (O&M)
- Military Construction (MILCON)
- Energy Resilience and Conservation Investment Program (ERCIP) *10 U.S.C. § 2914, 10 U.S.C. § 2802*
- Availability and Use of Energy Cost Savings (REFoRM)
10 U.S.C. § 2912

- **No Cost/ Low Cost Efforts**

- Personnel Behavior Modifications and Establishing Energy-conscious culture

- **Department of Energy Grants**

- Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) *42 USC § 8256 (b)*

- **DoD Office of Local Defense Community Cooperation (OLDCC) Grants** *10 USC §2391*

- Military Installation Sustainability
- Defense Community Infrastructure Program (DCIP)

- **DoD Technology Grants**

- Strategic Environmental Research & Development Program (SERDP)
10 U.S.C. §2901 - 2904
- Environmental Security Technology Certification Program (ESTCP)
10 U.S.C. §2901 - 2904

- **State, Local, and Utility Company Rebates, Tax Deductions, and Grants**

- Ability to use are often location and contract-vehicle and/or asset ownership dependent

- **Alternative Contract Execution Authorities** (using “normal” Appropriated Funds)

- Utility Service Contracts (*FAR Part 41*)
- Other Transaction Authority (OTA), *10 U.S.C. 2371b*
- Intergovernmental Support Agreements (IGSAs)
U.S.C. 2679

10



AMERICA'S ARMY:
THE STRENGTH OF THE NATION



ARMY ENERGY
#PowerToWin

*Energy Resilience Gives Us the
Power to Win*

www.asaie.army.mil/Public/ES

www.facebook.com/ASAIEE

www.facebook.com/ArmyOEI

www.youtube.com/USArmy

Twitter: @ASArmyIEE

Twitter: @ArmyOEI

